AMSAT News Service Weekly Bulletins
Issue: ANS-351
Date: 2006-12-17
Sources: amsat-ans-2006-ans-351-weekly-hyperkitty-6a949f1095.txt

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AMSAT NEWS SERVICE
ANS-351

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor(a)amsat.org

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SB SAT @ AMSAT $ANS-351.01
Changes to AO-51 CTCSS Access Tone

AMSAT News Service Bulletin 351.01
>From AMSAT HQ SILVER SPRING, MD.
December 17, 2006
To All RADIO AMATEURS
BID: $ANS-351.01

This week Drew Glasbrenner KO4MA, AMSAT-NA VP Operations reported that the CTCSS 67 Hz subaudible tone used on AO-51's uplink to enable the FM transponder has been turned off. Carrier access is all that is required to access this satellite.

Drew explained further, "The 67 Hz tone was originally designed to allow AO-51's downlink to be switched off when the satellite was not in use. The use of the subaudible tone access has been problematic over areas of heavy use and when trying to identify the seemingly growing interference issues experienced on the 2 meter uplink frequency."

Access into AO-51 is expected to improve worldwide. Despite the near ubiquity of subaudible tone enabled radios in North America, many areas of the world have limited or difficult access to this type of equipment, even in commercial off-the-shelf gear. Carrier-access enables amateur radio operators in these areas to use the satellite.

Drew concluded, "Full duplex operation is the most courteous and efficient means of operating the FM satellites. This allows you to listen to the downlink before you transmit as well as when you transmit to reduce QRMing other users. Also, please continue with renewed vigor to help identify and eliminate both non-amateur interference, and amateurs operating outside of the established bandplan that interfere with our satellites."

[ANS thanks Drew, KO4MA for the above information]

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SB SAT @ AMSAT $ANS-351.02
Eagle Prototype Parts Received

AMSAT News Service Bulletin 351.02
>From AMSAT HQ SILVER SPRING, MD.
December 17, 2006
To All RADIO AMATEURS
BID: $ANS-351.02

Dick, WD4FAB, mechanical engineer on the AMSAT Eagle satellite, reported the news that the Eagle Project has received the prototypes of the heat sinks that will be riveted into Eagle's high-power electronic modules to enable the dissipation from the power devices in those modules.

Dick thanked the team, "The heat sinks were fastidiously machined by our friends at Embry Riddle Aeronautic University, Daytona Beach, Florida. This is the culmination of discussions started over a year ago. We are very much indebted to Embry Riddle and Dr. Al Helfirck, K2BLA, a very long-time operator, for their participation in the Eagle Project. A tip of the hat to Al and his gang."

What makes these heat sinks very special is that they are machined from a high thermal conductivity, 99% pure, aluminum. This alloy is 33% higher conductivity than alloy aluminum, and as such it is quite soft and difficult to machine. In addition, the surface finish of these parts is also demanding and Embry Riddle Aeronautic University has presented us with a superb product.

Prior to launch the heat sink module surfaces will be protected by a plastic film to protect the thermal conductive and radiative surfaces of importance, as they all are of delicate and soft alloys.

[ANS thanks Dick, WD4FAB for the above information]

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SB SAT @ AMSAT $ANS-351.03
ISS Amateur Station Status

AMSAT News Service Bulletin 351.03
>From AMSAT HQ SILVER SPRING, MD.
December 17, 2006
To All RADIO AMATEURS
BID: $ANS-351.03

ARISS Project Engineer, Kenneth, N5VHO provided a status report on the amateur radio gear aboard the International Space Station. He said, "The Phase I amateur radio gear in the FGB module appears to have developed an intermittent audio issue that will require some crew time to be scheduled in order to try and determine the cause of the problem. This system has been used primarily for school contacts since the packet system associated with that radio began exhibiting problems during Expedition 6."

Kenneth continued, "The Phase II system in the ISS service module has not been operating properly since August 2006 when the default settings for the radio changed. The radio transmits and receives well and it will continue to be used for school contacts. But, until the radio is reprogrammed, only intermittent operations will be possible. A computer designated for amateur radio operations will allow reprogramming of the radio and is planned to arrive on the next

Progress vehicle in 2007. Until the radio is reprogrammed, it is unlikely that any of the automatic modes such as Packet and APRS, SSTV or the Crossband Repeater will be operating or will only operate for brief periods of time."

[ANS thanks Kenneth, N5VHO for the above information]

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SB SAT @ AMSAT $ANS-351.04
SKN on OSCAR 2007 To Be In Memory Of K7RR

AMSAT News Service Bulletin 351.04
>From AMSAT HQ SILVER SPRING, MD.
December 17, 2006
To All RADIO AMATEURS
BID: $ANS-351.04

All radio amateurs, worldwide, are cordially invited to participate in Straight Key Night on OSCAR 2007. This year, the event is dedicated to the memory of Cliff Buttschardt, K7RR. Cliff was an enthusiastic and longtime SKN participant on both OSCAR and HF, as well as a perennial Best Fist winner. He will be sorely missed.

Participating in SKN on OSCAR 2007 is easy. No rules, no scoring and no need to send in a log. Just operate CW through any OSCAR between 0000 and 2400 UTC on 1 January 2007, using a straight hand key.

In keeping with the friendly nature of this event, all participants are encouraged to nominate someone they worked for "Best Fist." Your nominee need not have the best fist of those you heard, just of those you worked. Please send your nomination to w2rs(a)amsat.org. A list of those nominated will appear in ANS and The AMSAT Journal.

[ANS thanks Ray, W2RS for the above information]

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SB SAT @ AMSAT $ANS-351.05
Satellite Shorts

AMSAT News Service Bulletin 351.05
>From AMSAT HQ SILVER SPRING, MD.
December 17, 2006
To All RADIO AMATEURS
BID: $ANS-351.05

* The STS-116 Shuttle launch carried to orbit three new satellites, RAFT-1, MARSCOM and ANDE, designed, built, and tested by the Midshipmen of the US Naval Academy's Satellite Laboratory in Annapolis, Maryland. After completing its primary mission of constuction of the International Space Station, the Shuttle crew is expected to deploy these satellites on December 20. The downlink for RAFT-1 and ANDE is on 145.825 MHz. MARSCOM will operate on Navy-Marine Corps MARS frequencies. RAFT is planned to be deployed at 00:05 UTC; ANDE is planned to be deployed at 19:42 UTC.

* 4X6EM/4Z7DFC at the Techsat Ground Control Station reported the Techsat1B, GO-32 is expected to resume its BBS packet satellite services this week. Stations have reported hearing the 435.225MHz 9600bps FSK KISS signal on December 15.

* Mineo, JE9PEL has written software to decode the FO-29 beacon. Refer to these links for more information:
http://www.ne.jp/asahi/hamradio/je9pel/fo29cwts.htm
http://www.ne.jp/asahi/hamradio/je9pel/fo29cwts.zip

* Time is running out to take advantage of the Pension Protection Act to help AMSAT's fund raising efforts. If you have reached the age of 70-1/2 you are required withdraw a certain amount from your IRA each year. The law allows you contribute a portion of the required withdrawal directly to AMSAT. The the amount you contribute directly is NOT counted as income and thus may put you into a lower tax bracket. It may also reduce the percentage of your Social Security income subject to taxation. Contact the AMSAT office to take advantage of this financial opportunity to build and fly Eagle.

* If you volunteer time to AMSAT-NA please remember to log your volunteer hours on the Volunteer Reporting System) on the AMSAT web site.

[ANS thanks everyone for the above information]

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SB SAT @ AMSAT $ANS-351.06
AMSAT Files Petition for Reconsideration With the FCC

AMSAT News Service Bulletin 351.06
>From AMSAT HQ SILVER SPRING, MD.
December 17, 2006
To All RADIO AMATEURS
BID: $ANS-351.06

AMSAT has filed a petition for reconsideration with the FCC regarding the most recent wording of the rules for orbital debris mitigation that were embedded in Report and Order 06-149. AMSAT points out to the Commission that our prior Petition for Reconsideration about orbital debris is still pending and is not a moot point as the Commission called in R&O footnote 169. AMSAT respectfully requested that the orbital debris amendments be deleted.

The full text of AMSAT's filing can be found on-line at:
http://gullfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_documen
t=6518712069 (careful with the line wrap.)

[ANS thanks Lee, KU4OS for the above information]

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SB SAT @ AMSAT $ANS-351.07
GeneSat Operational in Orbit

AMSAT News Service Bulletin 351.07
>From AMSAT HQ SILVER SPRING, MD.
December 17, 2006
To All RADIO AMATEURS
BID: $ANS-351.07

GeneSat-1, the latest university cubesat, was successfully launched from the Mid-Atlantic Regional Spaceport (MARS) at NASA Wallops Flight Facility on December 16, 2006 at 1200 hours UTC. It was a secondary payload aboard a Minotaur launch vehicle.

Earlier GeneSat press releases mentioned 437.075 MHz and 437.100 MHz

for the beacon frequency. Reception reports received from the USA,
Japan, and southeast asia confirm that 437.075 MHz is being used.
Many report the frequency seems to be 8-9 kHz below the published
frequency. Transmissions from GeneSat are telemetry packets in
AX.25 1200bps AFSK format.

The GeneSat mission website at http://www.genesat1.org describes the
satellite's mission and provides QSL information. Check out the rules
for the telemetry reception contest on this site.

Within hours after the launch the GeneSat Ops Team was reporting nominal
power and thermal conditions.
See: http://genesat1.engr.scu.edu/log/opslog.htm

Reception reports and received telemetry packets can be posted at:
http://genesat1.engr.scu.edu/beacon/beaconsubmission.htm

Additional GeneSat technical resources can be found at:
http://www.crestnrp.org/genesat1/pdf/BeaconDecoding.pdf
http://www.dk3wn.info/sat/afu/sat_genesat.shtml

Post Launch Two Line Elements:
GENESAT-1
1 99999U Genevec2 06350.62500000 -.00014664 00000-0 -26801-3 0 00000
2 99999 040.0599 076.9488 0017534 172.9505 257.1789 15.48261244000034

[ANS thanks the GeneSat Team and amateur satellite operators around the
 world for the above information]

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In addition to regular membership, AMSAT offers membership in the
President's Club. Members of the President's Club, as sustaining donors
to AMSAT Project Funds, will be eligible to receive additional benefits.
Application forms are available from the AMSAT Office.

73,
This week's ANS Editor,
JoAnne Maenpaa, K9JKM
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